2. Experiments in the Black Sea in the company of 1901.

In 1901, extremely important results were achieved in the field of wireless cabling.

The complex circuits introduced by A. S. this year in the sending and receiving systems immediately increased the range of the stations. New schemes were first tested between the vessels of the Black Sea Fleet, and these experiments, according to the results obtained, involuntarily attract special attention.

A. S. was well known for the Uden resonator, which had long been used in medical practice, and the idea of using the circuit of this resonator to excite the starting wire was extremely successful. The new sending system turned out to be much more complicated, but on the other hand, it made it possible to use noticeably more energy.

In these first experiments, we still did not have a sensitive thermal ammeter, and we had to observe the resonance moment of the system by the largest glow of the sending wire.

The idea of a complex reception scheme appeared in A. S. shortly before the production of the experiments itself; he informed her a few hours before the practical squadron left Sevastopol for Novorossiysk.

The experiments were mainly focused on two battleships: on the St. George the Victorious and on the Sinope. Both vessels wire length of about 120 feet was shaped *F* . Closed circuits consisting of two parallel large Leyden cans and 5-6 revolutions of the resonator were prepared in advance for these wires.

At five o'clock in the afternoon of August 19, "George the Victorious" began to move away from the squadron. At the first attempt of the stations to disperse, the exchange of telegrams for telegraph tape stopped at 9 pm at a distance of 18 miles. After 2 hours, the message is restored using the telephone receiver and at one in the morning the battleship "George the Victorious" receives an order to be removed again.

With this new attempt, the telegraphic range was reduced to 25 miles. At a distance of 39 miles, the exchange of telegrams by means of a telephone receiver ceased and at 6½ in the morning of August 20, "George the Victorious" began to approach the squadron. With the turn of the battleship, due to the influence of the mast, the conditions of transmission deteriorated significantly and the exchange of telegrams recovered only at 9 a.m. at a distance of 12 miles.

From 9 o’clock. the battleship "George the Victorious" is following a parallel course at a distance of 9 miles from the squadron. During this time, the stations managed to find out the results and it was possible to more accurately tune the test systems.

The first two attempts did not find out the range in the direction of “Sinop” - “St. George the Victorious”, and therefore at 11 o’clock in the morning it was decided to make the last test. "George the Victorious" received the order to retire until the reception on the telephone receiver is completely stopped.

The last telegram exchange with this receiver occurred at a distance of 28 miles, then the transmission goes only in one direction.

At 4 o’clock in the afternoon, when the squadron entered the Novorossiysk raid, deterioration of reception was detected at the station "George the Victorious" at a distance of 50 miles. Reception soon recovered and began to weaken only at 6 pm at a distance of 70 miles. At a distance of 80 miles, the transmission finally stopped and the battleship "George the Victorious", having completed his task, went to join the squadron. In this experiment, transmission deterioration was even sharper as vessels approached. Telegram resumed at a distance of 38 miles. At 4 a.m. on August 21, the battleship "George the Victorious" dropped anchor in Novorossiysk Bay. In the described experiments, which had to be conducted without interruption for 36 hours, participated b. Lieutenants Burling and I.I. Stepanov.

So, the complex schemes introduced by A. S. this year immediately increased the transmission range for reception on a telegraph apparatus to 25 miles, and for a telephone receiver to 60 miles.

A. S. was to leave Rostov-on-Don from Novorossiysk for the installation of two stations, at the invitation of the Don Girl's committee.